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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/675,135

09/29/2003

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EXAMINER

DIXON, ANNETTE FREDRICKA

ART UNIT

PAPER NUMBER

3771

MAIL DATE

DELIVERY MODE

08/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/675,135

Applicant(s)

BROOKMAN, MICHAEL J.

Examiner

Annette F. Dixon

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on July 5, 2007. Examiner acknowledges claims 1-4, and 6-24 are pending in this application, with claims 1-4, 7-10, 14, 16, 18, 19, 22 having been amended, and claims 23 and 24 having been newly added.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, 9, 10, 13-15, 17, 18, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucha (DE19503027) in view of Hilton et al. (EP 0 241 188 A1) and Kanwisher et al. ('098).

As to Claims 1, 9, 23, and 24, the differences between Mucha and claim 1 are a regulator means to enable delivery of said pressurized gas to a user of said apparatus and means adapted to generate a signal that is adapted to advise a wearer whether the gas emerging from said filter system has insufficient oxygen to be safely breathable and comprises at least 19.5% oxygen. Hilton et al., in a breathing apparatus, teach a regulator means (34) to enable delivery of said pressurized gas to a user of said apparatus. The purpose of regulator means (34) of Hilton et al. is to reduce the pressure

of the breathable gas leaving pressurized tank (33) so that it may be delivered to a user at a safe pressure. It would have been obvious to modify the pressurized tank of Mucha to employ a regulator means because it would have reduced the pressure of the breathable gas leaving pressurized tank so that it may be delivered to a user at a safe pressure as taught by Hilton et al. Kanwisher et al., in a breathing apparatus, teach sensor means (46) adapted to determine whether gas emerging from a filter system (14) is safely breathable and comprises at least 19.5% oxygen (col.7, lines 52-57 and lines 69-75). Kanwisher et al. also teach means (col.4, lines 42-50) associated with the sensor means adapted to generate a signal that is adapted to advise (e.g. via indicator 60) a user that gas emerging from the filter system has insufficient oxygen to be safely breathable and means (col.7, lines 69-75) to, in response to said signal, open and/or close said at least one valve (40). Kanwisher et al. teach that these elements work together for the purpose of maintaining oxygen concentration within a range of 0.4 to 0.7 atmospheres (col.4, lines 42-50). It would have been obvious to modify Mucha to include sensor means for determining the suitability of breathable air including the percentage of oxygen therein because it would have provided a means for maintaining the oxygen concentration within the breathable gas in a safe range of 0.4 to 0.7 atmospheres as taught by Kanwisher et al..

As to Claims 2 and 14, Hilton et al. (fig.7) teach plural filter media (9).

As to Claims 3 and 10, Hilton et al. (figs.4-6,8,9) teach a mask adapted to establish and maintain a seal with the face of a user so as to isolate at least the nose and mouth of said user from ambient air, and adapted to maintain a seal under

conditions of positive pressure within the mask (note separate valves for exhalation and inhalation).

As to Claims 4, 13, 17, 18, 20 and 21, Mucha (fig.1) discloses a first conduit (6) disposed in operative relationship to and between said cylinder (9) and said mask (1), said second conduit means (5) being disposed between said filter system (7) and said mask (1), and said at least one valve (4) is adapted to control the flow of cleaned air from said filter system and/or pressurized breathable gas from said cylinder to said mask.

As to Claims 6 and 15, Hilton et al. teach a one-way exhaust valving means (4) operatively associated with the mask and operative when a user exhales whereby increasing the internal pressure in said mask above the pressure imposed by said powered forcing of ambient air through said filter system, and above the pressure imposed by gas being fed from said cylinder.

4. Claims 7, 8, 16, 19, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucha (DE19503027) in view of Hilton et al. (EP 0 241 188 A1) and Kanwisher et al. ('098) as applied to claim 1 and 9 above, and further in view of Bartels & Rieger (DE 3,512,644).

As to Claims 7, 8, 16, 19, and 22, the system of Mucha/Hilton/Kanwaisher et al. discloses all of the recited elements, yet does not expressly disclose a means for manually opening or closing said at least one valve by said user. However, at the time the invention was made, the use of a manual user-operated valve was known.

Specifically, Bartels & Rieger teaches manually increasing the flow of gas from a gas cylinder (11) by opening a valve (19). The purpose of providing a manually actuated valve is to provide a user with means for switching between a filtered air source and a compressed air source thereby enabling a user to conserve the compressed air source for as long as possible (see abstract). Further, one of ordinary skill would recognize that the amount of oxygen required by users differs from one person to the next; consequently, a wearer may prefer to have manual control over when and how much oxygen is dumped into the system. Therefore, it would have been obvious to further modify Mucha to include a manually operated valve that selects between the compressed air source and the filtered air source because it would have provided a user with means for switching between a filtered air source and a compressed air source thereby enabling a user to conserve the compressed air source for as long as possible as taught by Bartels & Rieger.

5. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mucha (DE19503027) in view of Hilton et al. (EP 0 241 188 A1) and Kanwisher et al. ('098) as applied to claim 10 above, and further in view of Hubner ('518).

As to Claims 11 and 12, the system of Mucha/Hilton/Kanwaisher et al. discloses all of the recited elements, yet does not expressly disclose a means adapted to determine if the composition of gas emerging from said filter system comprises a sufficiently small amount of particulate matter to be safely breathable. However, at the time the invention was made the use of a filter medium for filtering particulates was

known. Specifically, Hubner teaches analyzing (via sensor 7, 7a-7e) an ambient atmosphere to determine if it is not breathable and notifying the user if the ambient atmosphere is not breathable for the purpose of preventing a user from breathing toxic gases by notifying the user that the filtering capacity of the filter medium is failing as well as preventing the accumulation of potentially explosive gases. Therefore, it would have obvious to modify the breathing apparatus of Mucha to include an analysis of ambient gas to determine if the ambient gas is breathable because it would have prevented a user from breathing toxic gases by notifying the user that the filtering capacity of the filter medium is failing as well as preventing the accumulation of potentially explosive gases as taught by Hubner.

Response to Arguments

6. Applicant's arguments with respect to claims 1-4, and 6-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

Art Unit: 3771

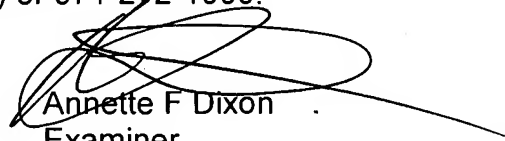
TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Annette F. Dixon whose telephone number is (571) 272-3392. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Annette F Dixon
Examiner
Art Unit 3771


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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700
8/29/07